

**REMARKS**

**I. STATUS OF CLAIMS**

Applicant has cancelled claims 10-19 and has added new claims 20-27. Support for the claim amendments can be found in the as-filed specification and original claims. Specifically, support for the claim language recited in claim 20 can be found at paragraphs [0083], [0093], and [0104], and Examples shown in Tables 1-4, of the as-filed specification. Claims 21-27 also correspond to now-cancelled claims 11 and 13-18, respectively. No new matter has been introduced.

**II. CLAIM OBJECTIONS**

The Examiner objected to claim 12 as allegedly failing to further limit the subject matter of a previous independent claim. Office Action at 2. The Examiner also objected to claim 19 for an alleged informality. *Id.* Applicant submits that cancellation of claims 12 and 19 renders those objections moot. None of the new claims contains the objected-to claim language.

**III. PRIOR ART REJECTIONS**

**A. Konishi does not anticipate claims 20-27**

The Office Action rejected claims 10-19 under 35 U.S.C. § 102(b) over U.S. Patent No. 6,300,292 to Konishi et al. ("Konishi"). Office Action at 3. Cancellation of claims 10-19 renders this rejection moot, and Applicant respectfully submits that Konishi does not anticipate new claims 20-27 for at least the following reasons.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. M.P.E.P. § 2131.

Claim 20 recites, among other things, “a phosphoric acid ester of 0.05-5% by mass based on the total amount of the oil; and a sulfidized ester of 0.1-20% by mass based on the total amount of the oil.” Konishi does not disclose, expressly or inherently, at least the above-quoted features recited in claim 20. Konishi, in particular, does not disclose a phosphoric acid ester, nor a combination of a phosphoric acid ester and a sulfurized ester. Konishi instead discloses zinc dithiophosphate, which is not a phosphoric acid ester, or a combination of a phosphoric acid ester and a sulfurized ester. Konishi, abstract, and col. 1, lines 44-45.

Since Konishi fails to disclose each and every element of claim 20, claim 20 and its dependent claims 21-27 are not anticipated by Konishi under § 102(b).

**B. The combination of the cited references does not teach or suggest all of the features of claim 20**

The Office Action rejected claims 10-18 under 35 U.S.C. § 103(a) rejection over U.S. Patent No. 6,383,992 to Garmier et al. (“Garmier”) in view of Konishi, and also rejected claims 15-18 under 35 U.S.C. § 103(a) over Konishi in view of U.S. Patent Application Publication No. 2002/0035043 to Yokota et al. (“Yokota”). Office Action at 8, 9.

Cancellation of claims 10-19 renders these rejections moot, and Applicant respectfully submits that the combinations of Garmier, Konishi, and Yokota do not render obvious new claims 20-27 for at least the following reasons.

As discussed above, Konishi fails to disclose or suggest all of the features recited in claim 20, in particular, “a phosphoric acid ester of 0.05-5% by mass based on the total amount of the oil; and a sulfidized ester of 0.1-20% by mass based on the total

amount of the oil.” Garmier does not cure this deficiency of Konishi. Garmier does not disclose or suggest the combination of a phosphoric acid ester and a sulfurized ester, as claimed. The Office Action alleged that Garmier discloses a dithiocarbamate (compound i, Table II). Office Action at 8. The dithiocarbamate compound ( $\text{NH}_2\text{CS}_2\text{H}$ ) is not a sulfurized ester recited in claim 20. Further, there is no suggestion in Garmier, or recognition of any need, to provide a combination of a phosphoric acid ester and a sulfurized ester to its disclosed oil composition. See Examination Guidelines update, Federal Register, Vol. 75, No. 169, pages 53646-7, September 1, 2010 (the claim may be nonobvious if the problem which suggests use of the claim had been previously unknown, citing *In re Omeprazole*, 536 F.3d 1361 (Fed. Cir. 2008)).

Yokota also does not remedy the deficiency of Konishi and Garmier. Yokota discloses at paragraph [0084] that sulfuric- and phosphoric- extreme pressure additives may be added to the oil composition disclosed in Yokota; however, Yokota does not disclose or suggest phosphoric acid ester or sulfurized ester, nor a combination of a phosphoric acid ester and a sulfurized ester. This suggestion only exists in the present application. Accordingly, any rejection under 35 U.S.C. § 103(a) over Konishi, Garmier, and Yokota constitutes impermissible hindsight. See M.P.E.P. § 2142 (“impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art”).

These elements of the claimed compound are not a combination of prior art elements according to known methods to yield predictable results, nor a simple substitution of known elements for others to obtain predictable results, nor an application of a known technique to improve a similar device or method in the same way,

nor a choice from a finite number of identified, predictable solutions with a reasonable expectation of success. See M.P.E.P. § 2143.

### **C. Unexpected Beneficial Results**

Furthermore, the claimed oil composition demonstrates unexpected beneficial results that were neither achieved nor predicted in the cited references. See *also* Reply to Office Action filed July 28, 2010, pages 8-9; Declaration of Satoshi SUDA under 37 C.F.R. § 1.132 filed February 9, 2010, pages 4-5. For instance, Examples 6, 17, and 18, containing a combination of a phosphoric acid ester and a sulfurized ester, as recited in claim 20, showed unexpected beneficial results such as higher abrasion resistance, as compared to all other examples that do not contain a combination of a phosphoric acid ester and a sulfurized ester. See Tables 2 and 4 of the as-filed specification.

In response to the Office Action's assertions on pages 8-9, Applicant respectfully submits that claim 20 is commensurate in scope with the Examples of the claimed oil composition disclosed in the as-filed specification. In particular, the content of the triester of fatty acids and glycerin, phosphoric acid ester, and sulfidized ester in the oil; the content of oleic acid and linoleic acid in the fatty acids of the triester, the kinematic viscosity at 40°C, the total degree of unsaturation of the triester as recited in claim 20 are particularly set forth in view of the scope of Examples 6, 17, and 18, in Tables 1, 2, and 4 of the as-filed specification. M.P.E.P. 2145 (When considering whether proffered evidence is commensurate in scope with the claimed invention, Office personnel should

not require the applicant to show unexpected results over the entire range of properties possessed by a chemical compound or composition).

As noted above, Konishi failed to disclose or suggest the claimed combination of a phosphoric acid ester and a sulfurized ester as recited in claim 20. Moreover, Konishi neither discloses nor suggests an improvement in abrasion resistance from its oil compositions. As discussed above, neither Garmier nor Yokota discloses or suggests the features of claim 20 missing from Konishi, and both references also fail to predict the above-discussed unexpected beneficial results. The Office Action also acknowledged that "Applicants have compared their results to the closest prior art which in this case would Konishi." Office Action, page 8. Accordingly, one of ordinary skill in the art would not have reasonably expected beneficial results in abrasion resistance from the cited references. See M.P.E.P. § 2143.02.

Absent such teachings in the cited references, use of the claimed oil would not have been one of a finite number of predictable solutions to solve the pertinent problems in oils for metal working, nor a simple substitution of one known element for another to obtain predictable results. See M.P.E.P. § 2143.

For at least the above reasons, claim 20 is not obvious over the cited references. Claims 21-27 depend from claim 20 and incorporate all of the features of claim 20. Claims 21-27, therefore, also are not obvious at least due to their respective dependence from amended claim 20.

#### **IV. CONCLUSION**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and timely allowance of the pending claims.


The Examiner is invited to contact Applicant's representative if there are any remaining issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

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